Amendments to the Specification

Amend paragraphs 0001, 0013, 0032, 0067, 0068 and 0089 as shown below in marked form:

[0001] This application is a continuation-in-part of pending Application Serial No. 09/757,955 filed January 10, 2001, entitled COATING DEVICE AND METHOD (now U.S. Patent No. 6,737,113 B1), the entire disclosure of which is incorporated by reference herein.

[0013] In the above-mentioned ~~Application Serial No. 09/757,955~~ U.S. Patent No. 6,737,113 B1, repeating and random coating defects are eliminated or at least significantly reduced through the use of pick-and-place contacting devices. Rotating rolls (and especially undriven rolls that can corotate with the substrate as it passes by the rolls) are a preferred type of pick-and-place device in ~~such Application~~ the patent. Rolls having periods of contact (defined as the time between successive contacts by a point on the device with the substrate) that were equal to one another were not preferred. Instead, the preferred pick-and-place devices were differently sized rolls, or rolls operated at different speeds, with the sizes or speeds (and thus the periods of contact) not being periodically related to one another.

[0032] **Figs. 10a** though **10d** are ~~shaded~~ patterned contour plots of coating caliper vs. web distance when a single severe void passes through an improvement station containing 250 equally-sized rolls each having a period of 10 dimensionless web length elements.

[0067] However, by using a suitably large number of devices, the quality of even a grossly non-uniform input coating can be improved. The simulation shown in **Figs. 10a** through **Fig. 10d** illustrates the effect of uniform size rolls on a void. **Figs. 10a** through **10d** are ~~shaded~~ patterned contour plots of coating caliper. **Figs. 10a** through **10c** illustrate the down web coating caliper that results when a single, random, relatively severe void

interrupts a uniform steady coating and passes through an improvement station containing 250 equally-sized rolls each having a period of 10 dimensionless web length elements. The simulation calculated the coating caliper of each of 1900 successive down web length elements following the first element containing the void as it passes through the improvement station. **Fig. 10a** depicts the results for down web length elements 1 through 301. **Fig. 10b** depicts the results for down web length elements 400 through 700. **Fig. 10c** depicts the results for down web length elements 1600 through 1900. **Fig. 10d** provides a higher resolution view of a portion of **Fig. 10a,** together with a change in scaling the contours to show the results for only the first 85 down web length elements and only the first 26 rolls of the improvement station. The initial void was assumed to be a complete absence of coating for a period equal to 50% of the rotation period of the rolls. Such a void can be generated by accidentally lifting a running web out of contact with a gravure roll for an instant during continuous coating. The x-axis in **Figs. 10a** through **10d** represents dimensionless length elements of the down web coating lane commencing with the void. The web length elements pass sequentially from a specified roll of the improvement station to subsequent rolls in the improvement station. The coating calipers of individual web length elements are normalized by dividing by the uniform, void-free coating caliper.

[0068] The dimensionless caliper or caliper range is plotted in **Figs. 10a** through **10d** by shading <u>or patterning</u> each element of the web length of interest according to its coated caliper. For **Fig. 10a** and **Fig. 10b**, the shades <u>or patterns</u> depict dimensionless caliper ranges of 0.949 to 0.959, 0.959 to 0.979, 0.979 to 0.989, 0.989 to 0.999 and 0.999 to 1.000. For **Fig. 10c**, the shades <u>or patterns</u> depict dimensionless caliper ranges of 0.959 to 0.979, 0.979 to 0.989, 0.989 to 0.999 and 0.999 to 1.000. For **Fig. 10d**, the shades <u>or patterns</u> depict dimensionless caliper ranges of 0.000 to 0.499, 0.499 to 0.749, 0.749 to 0.799, 0.799 to 0.849, 0.849 to 0.899, 0.899 to 0.949, 0.949 to 0.999 and 0.999 to 1.000. Each element of the web length of interest is shown after it has been contacted by the contacting rolls. A ~~contour~~ plot is generated by stacking ~~the shade-coded~~ <u>coated caliper</u> element strings along the y-axis. For example, the ~~shaded~~ plot area from web element 1 to web element 2 and from roll 0 to roll 1 depicts the caliper of the first web element before it

passes the first roll. Advancing along or parallel to the x-axis of **Figs. 10a** through **10d** gives the dimensionless caliper along a contiguous group of length elements down the web. Advancing up or parallel to the y-axis gives the dimensionless caliper history for a particular web length element after it passes roll after roll for a series of 251 rolls. Images of the initial void propagate along the web and are modified as the web elements pass each roll. A diminished image of the void is produced upon each successive roll as the void passes by each roll. This diminished image re-contacts succeeding elements on the web, producing more diminished images on the web which in turn produce yet more diminished images on the succeeding rolls.

[0089] Spraying can be accomplished using many different types of devices. Examples include point source nozzles such as airless, electrostatic, spinning disk and pneumatic spray nozzles. Line source atomization devices are also known and useful. The droplet size may range from very large (e.g., greater than 1 millimeter) to very small. The nozzle or nozzles can be oscillated back and forth across the substrate, e.g, in a manner similar to the above-described needle applicator. Particularly preferred drop deposition devices are described in copending U.S. Patent Application Serial Nos. 09/841,380 entitled ELECTROSTATIC SPRAY COATING APPARATUS AND METHOD and 09/841,381 entitled VARIABLE ELECTROSTATIC SPRAY COATING APPARATUS AND METHOD (now U.S. Patent No. 6,579,574 B1), both filed April 24, 2001, the entire disclosures of which are incorporated by reference herein.